



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Roy E. Scheuerlein, et al.

Title: MULTIPLE TWIN CELL NON-VOLATILE MEMORY ARRAY AND
LOGIC BLOCK STRUCTURE AND METHOD THEREFOR

Application No.: 10/675,212

Filed:

September 30, 2003

Examiner: Ho, Hoai V.

Group Art Unit:

2818

Atty. Docket No.: 023-0024

Confirmation No.:

9946

March 16, 2005

Mail Stop Amendment
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450**INFORMATION DISCLOSURE STATEMENT**
37 C.F.R. § 1.97(c)

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings to the Examiner's attention in the above-identified application the patents, publications, applications or other information identified in the attached:

- ☒ Form(s) PTO/SB/08A (8 page(s), with copy of 2 reference(s)).
- ☒ Form(s) PTO/SB/08B (1 page(s), with copy of 10 reference(s)).
- ☒ Listing of Pending Applications (1 page(s), with copy of no application(s)).
- ☐ Other: N/A

Citation of such information shall not be construed as (i) an admission that the information necessarily is, or corresponds to, prior art with respect to the instant invention, (ii) a representation that a search has been made, other than as described herein, or (iii) an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance through (i) an English language abstract, (ii) an English language equivalent application, or (iii) if cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

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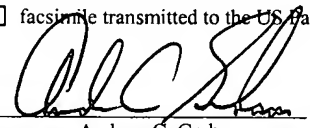
Pursuant to operative regulations, certain copies need not be provided and corresponding information is identified in this Information Disclosure Statement by citation only. In particular,

- ☒ In accordance with 37 C.F.R. § 1.98(a)(2)(ii), copies of cited U.S. Patents and U.S. Patent Application Publications are not included.
- ☐ Certain information was submitted to, or cited by, the Office in Application No(s). N/A, filed N/A, to which the above-identified application claims priority under 35 U.S.C. § 120. In accordance with 37 C.F.R. § 1.98(d), copies of that information are not included.
- ☒ Pursuant to 1287 OG 163 (October 19, 2004), for those cited pending U.S. patent applications filed (or which entered the national stage under 35 U.S.C. § 371) on or after June 30, 2003 or which are otherwise stored in the USPTO's Image File Wrapper system, copies are not included.

FEE AUTHORIZATION

The undersigned believes that this Information Disclosure Statement is being filed before the mailing date of (i) a final action under § 1.113, (ii) a notice of allowance under § 1.311 or (iii) an action that otherwise closes prosecution. Accordingly, this Information Disclosure Statement is accompanied by the fee set forth in § 1.17(p) as follows:

- ☐ A check in the amount of \$_____ is enclosed herewith.
- ☒ The undersigned hereby authorizes the Commissioner to charge the fee set forth in § 1.17(p) (\$180.00) to Deposit Account No. 50-0631.

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Respectfully submitted,



Andrew C. Graham, Reg. No. 36,531
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EXPRESS MAIL LABEL: _____

PTO/SB/084 (Substitute for form 1449/PTO)		Attorney Docket No.: 023-0024
		Application No.: 10/675,212
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		First Named Inventor: Scheuerlein et al.
		Filing Date: September 30, 2003
		Group Art Unit: 2818
		Examiner Name: Hoai V. Ho
Sheet 1 of 8		Date Submitted: March 16, 2005

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	AA	3,576,549	04-27-1971	Hess et al.		
	AB	3,582,908	06-01-1971	Koo et al.		
	AC	3,634,929	01-18-1972	Yoshida et al.		
	AD	3,671,948	06-20-1972	Cassen et al.		
	AE	3,717,852	02-20-1973	Abbas et al.		
	AF	3,728,695	04-17-1973	Frohman-Bentchkowsky		
	AG	3,787,822	01-22-1974	Riout		
	AH	3,863,231	01-28-1975	Taylor		
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Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	AN	EP 0 626 726 A2	11-30-1994			
	AO	WO 97/47041	12-11-1997			
	AP					
	AQ					
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional).

²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.

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⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

⁶Applicant is to place a check mark here if English language Translation is attached.

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	AR	4,272,880	06-16-1981	Pashley	
	AS	4,281,397	07-28-1981	Neal et al.	
	AT	4,419,741	12-06-1983	Stewart et al.	
	AU	4,420,766	12-13-1983	Kasten	
	AV	4,442,507	04-10-1984	Roesner	
	AW	4,488,262	12-11-1984	Basire et al.	
	AX	4,489,478	12-25-1984	Sakurai	
	AY	4,494,135	01-15-1985	Moussie	
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	BE					
	BF					
	BG					
	BH					
Examiner Signature				Date Considered		

PTO/SB/08A (Substitute for form 1449/PTO)	Attorney Docket No.: 023-0024
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	BI	4,597,162	07-01-1986	Johnson et al.	
	BJ	4,646,266	02-24-1987	Ovshinsky et al.	
	BK	4,739,497	04-19-1988	Itoh et al.	
	BL	4,809,231	02-28-1989	Shannon et al.	
	BM	4,820,657	04-11-1989	Hughes et al.	
	BN	4,823,181	04-18-1989	Mohsen et al.	
	BO	4,868,616	09-19-1989	Johnson et al.	
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	BT	4,943,538	07-24-1990	Mohsen et al.	
	BU	5,070,383	12-03-1991	Sinar et al.	

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	BV					
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	BZ	5,070,384	12-03-1991	McCollum et al.	
	CA	5,126,290	06-30-1992	Lowrey et al.	
	CB	5,233,206	08-03-1993	Lee et al.	
	CC	5,306,935	04-26-1994	Esquivel et al.	
	CD	5,311,039	05-10-1994	Kimura et al.	
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	CF	5,367,207	11-22-1994	Goetting et al.	
	CG	5,391,518	02-21-1995	Bhushan	
	CH	5,427,979	06-27-1995	Chang	
	CI	5,441,907	08-15-1995	Sung et al.	
	CJ	5,463,244	10-31-1995	De Araujo et al.	
	CK	5,535,156	07-09-1996	Levy et al.	
	CL	5,536,968	07-16-1996	Crafts et al.	

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	CM					
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	CQ	5,568,421	10-22-1996	Aritome	
	CR	5,587,944	12-24-1996	Shen et al.	
	CS	5,608,670	03-04-1997	Akaogi et al.	
	CT	5,621,683	04-15-1997	Young	
	CU	5,640,343	06-17-1997	Gallagher et al.	
	CV	5,675,547	10-07-1997	Koga	
	CW	5,726,484	03-10-1998	Hart et al.	
	CX	5,737,259	04-07-1998	Chang	
	CY	5,745,407	04-28-1998	Levy et al.	
	CZ	5,751,012	05-12-1998	Wolstenholme et al.	
	DA	5,776,810	07-07-1998	Guterman et al.	
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	DC	5,793,697	08-11-1998	Scheuerlein	

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	DD					
	DE					
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	DH	5,818,748	10-06-1998	Bertin et al.	
	DI	5,818,749	10-06-1998	Harshfield	
	DJ	5,835,396	11-10-1998	Zhang	
	DK	5,883,409	03-16-1999	Guterman et al.	
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	DM	5,953,249	09-14-1999	Van der Wagt	
	DN	5,991,193	11-23-1999	Gallagher et al.	
	DO	6,005,270	12-21-1999	Noguchi	
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	DS	6,130,835	10-10-2000	Scheuerlein	
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	DV					
	DW					
	DX					
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	DY	6,185,122 B1	02-06-2001	Johnson et al.	
	DZ	6,240,046	05-29-2001	Proebsting	
	EA	6,243,287	06-05-2001	Naffziger et al.	
	EB	6,262,699	07-17-2001	Suzuki et al.	
	EC	6,278,711	08-21-2001	Ganmukhi et al.	
	ED	6,291,836	09-18-2001	Kramer et al.	
	EE	6,363,000	03-26-2002	Perner et al.	
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	EG	6,420,215 B1	07-16-2002	Knall et al.	
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	EI	6,515,888	02-04-2003	Johnson et al.	
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	EK	6,522,594	02-18-2003	Scheuerlein	

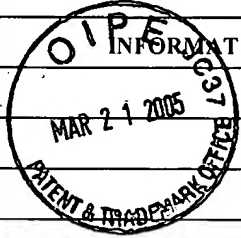
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	EP	6,525,949	02-25-2003	Johnson et al.	
	EQ	6,545,898	04-08-2003	Scheuerlein	
	ER	6,567,287	05-20-2003	Scheuerlein	
	ES	6,574,145	06-03-2003	Kleveland et al.	
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	EV	6,618,295	09-09-2003	Scheuerlein	
	EW	6,631,085	10-07-2003	Kleveland et al.	
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	EY	6,856,572 B2	02-15-2005	Scheuerlein et al.	
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	FB				

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	FE					
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Sheet 1 of 1		Date Submitted: March 16, 2005

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AA	CROWLEY ET AL., "512Mb PROM with 8 Layers of Antifuse/Diode Cells", 2003 IEEE ISSCC Conference, Session 16, Non-Volatile Memory, Paper 16.4, pp. 1-3, and corresponding presentation slides (23 pages)..	
	AB	DE GRAAF, C. ET AL., "A Novel High-Density Low-Cost Diode Programmable Read Only Memory," 1996 IEEE, IEDM Technical Digest, San Francisco, CA, December 8-11, 1996, pp. 189-192.	
	AC	EVANS, ROBERT J. ET AL., "Energy Consumption Modeling and Optimization for SRAM's," IEEE Journal of Solid-State Circuits, Vol. 30, No. 5, May 1995, pp. 571-579.	
	AD	GREENE, JONATHAN ET AL., "Antifuse Field Programmable Gate Arrays," Proceedings of the IEEE, Vol. 81, No. 7, New York, July 1993, pp. 1042-1056.	
	AE	HARDEE, KIM C. AND RAHUL SUD, "A Fault-Tolerant 30 ns/375 mW 16K x 1 NMOS Static RAM," IEEE Journal of Solid-State Circuits, Vol. SC-16, No. 5, October 1981, pp. 435-443.	
	AF	NAJI, PETER K. ET AL., "A 256kb 3.0V 1T1MTJ Nonvolatile Magnetoresistive RAM," 2001 IEEE ISSCC, February 6, 2001, Paper 7.6, and corresponding presentation slides (35 pages).	
	AG	NISHIHARA, TOSHIYUKI ET AL., "A Quasi-Matrix Ferroelectric Memory for Future Silicon Storage," IEEE Journal of Solid-State Circuits, Vol. 37, No. 11, November 2002, pp. 1479-1484.	
	AH	SUGIBAYASHI, TADAHICO ET AL., "A 30-ns 256-Mb DRAM with a Multidivided Array Structure," IEEE Journal of Solid-State Circuits, Vol. 28, No. 11, November 1993, pp. 1092-1098.	
	AI	TAKEUCHI, KEN ET AL., "A Negative V _{th} Cell Architecture for Highly Scalable, Excellently Noise-Immune, and Highly Reliable NAND Flash Memories," IEEE Journal of Solid-State Circuits, Vol. 34, No. 5, May 1999, pp. 675-684.	
	AJ	WADA, TOSHIO ET AL., "A 15-ns 1024-Bit Fully Static MOS RAM," IEEE Journal of Solid-State Circuits, Vol. SC-13, No. 5, October 1978, pp. 635-639.	
	AK		
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	AN		
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